Vision on Teaching and Learning
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Introduction

The policy document *Vision on Teaching and Learning* is an elaboration of the principle lines set out in the ‘Education’ section of the University of Amsterdam’s *Strategic Plan 2011-2014: An Eye for Talent*, which focuses on continuity together with innovation. Two lines that have been continued from the previous Strategic Plan are improving the quality of study programmes and increasing study success rates. Other important starting points for this *Vision on Teaching and Learning* are the Veerman Committee report on the Future Sustainability of the Dutch Higher Education System\(^1\) and the Strategic Agenda of the Dutch Ministry of Education, Culture and Science entitled ‘Quality in Diversity’ (*Kwaliteit in verscheidenheid*).\(^2\) The Veerman Committee’s recommitment to the binary system in the Netherlands calls for a clearer distinction between higher education with an applied emphasis and higher education with a research emphasis. As a result of exponential growth in student numbers, the level of these two forms of higher education appears to have grown too close together. To re-emphasise the distinction, this *Vision on Teaching and Learning* focuses on themes such as academic training and research-intensive programmes, along with the necessary changes in the mindset of the teaching staff and students that are required in order to achieve these goals. Innovation in education only has a chance of succeeding if specific efforts are made at all levels, namely at the curriculum, teacher and student levels.

The strategic policy development at the University of Amsterdam (UvA) with respect to teaching and learning is structured like a three-stage rocket: the strategic priorities are set out in the *Strategic Plan*, the priorities are expanded upon in the *Vision on Teaching and Learning* and a number of priorities are given more concrete form in separate policy documents.

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1. Analysis of the environment

Higher education has been in the spotlight again recently. The use of crisis language in this context is nothing new. When Clark Kerr, former president of the University of California, addressed a meeting of the American Council on Education in 1973, he cited recently published books on the ‘state of academia’ with the following descriptors in their titles: anarchy, bankruptcy, blindness, chaos, confrontation, crisis, death, degradation, destruction, explosion, failure. (He stopped after the titles beginning with ‘f’). In that climate of extreme language, Kerr called for moderation and optimism:

“To those who see only gloom and doom, we can say that much that is good is occurring. To those who say that everything fails, we can say that much is, in fact, succeeding. To those who see only problems, we can say that there are possibilities available for their alleviation.”

Although crisis language prevails again today in higher education, the current ‘crisis’ is different from the previous one.

Participation in higher education grew exponentially in the 1960s. After a period of stabilisation in the 1980s, strong growth resumed at the end of the 1990s and continues today. This expansion will persist in the years to come. The expectation is that the number of participants in higher education compared to that in 2010 will increase by 18.6 % and 23.5 % in 2030.⁴

High demands are being placed on higher education. The Veerman Committee report has convinced the entire higher education sector that a quality stimulus is required and that radical changes are thus urgently needed. In general, higher education in the Netherlands is of a high standard, but the country’s ambitions call for a further quality improvement. The Strategic Agenda of the Dutch Ministry of Education, Culture and Science outlines a long-term perspective for

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higher education that can briefly be summarised as follows. Standards in higher education with respect to study programmes and students must be raised across the board. Intake interviews and ‘selection at the gate’ will be permitted. Institutions must aim for more contact hours and smaller class sizes (particularly in the first years of the Bachelor’s phase), teaching staff with excellent qualifications, excellent curricula, a strict approach to study progress, fewer resits, and a solid guarantee of basic quality. These, briefly, are the measures that will help to enhance the quality of higher education. The task is a considerable one, particularly since government funding is not keeping pace with the expansion in student numbers and the related increasing diversity of the student population.

While there are reasons for optimism such as the high level of interest in higher education and the generally high standard of higher education in the Netherlands, there are also reasons for caution, given that the above ambitions must be realised at a time – at least in the coming years – when government funding will remain more or less unchanged.

1.1. Higher education in the future

A number of social developments are influencing the shape higher education will take in the years ahead. In the first place, as a consequence of the increased rationalisation of production processes and the worldwide division of labour associated with globalisation, there is a shift in the Dutch economy away from agriculture and industry towards services. The importance in the economy of private-sector and public-sector services and care is increasing.\(^5\)

In the second place, the level of education of the working population is increasing, owing to growth in the number of more highly qualified people. Relatively low-qualified older people who leave the labour market are replaced by relatively highly qualified younger people. Although the previous Dutch government formulated an objective (as part of the Lisbon Agenda) whereby 50% of those aged 25 to 44 who were participating in the labour force in the Netherlands would be highly qualified by 2020, the expectation is that this

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objective will not be achieved. Instead, this percentage will probably rise to 44%. Figure 1 shows the development of the working population to 2020.

![Figure 1](image)

**Figure 1.** Development of the working population of the Netherlands, by level of qualification (in millions). *Source: CEDEFOP (2009)*

In the third place, technological advances have led to changes in society that require not only a more highly qualified labour force, but also more advanced skills such as analytical, complex reasoning, critical thinking and problem-solving capacities, social and communication skills, and flexibility. Unfortunately, many public sector and private non-profit organisations are failing to keep up with these developments. Higher education must change; more innovation is required.

The latter claim appears to contradict the fact that the Netherlands is among the world’s best when it comes to academic output and quality. However, many university rankings measure reputation according to research performance, while the research-intensive universities in the Netherlands, which do well in

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the rankings, perform less well when it comes to teaching and learning. More students than ever are embarking on university degree programmes, but less than half of them graduate within the specified time and many of them do not graduate at all. Moreover, the performance of non-traditional groups of students (for example, students with a non-Dutch background), who are forming a growing proportion of the student population, do even less well. This is because the higher education system has not evolved to serve these groups of students in an effective, non-traditional way. It also appears that too many university graduates do not possess the advanced skills mentioned above.\(^7\)

The higher education system has another innovation deficiency, one which has been put forward in countless books.\(^8\) Much of this literature refers to the American education system. In fact, though, the situation in Europe is not dissimilar.\(^9\) Although the criticism in these books is varied and often frank, the fundamental direction of higher education itself is not discussed. The result is that the proposed solutions are made to depend largely on the willingness of established institutions to reform. Other critics are less loyal to the ideal of the university as we know it today. They regard developments in information technology as the key to a whole new world of higher education. But these are not new ideas either. In the early days of the internet revolution, numerous publications already appeared on this subject.\(^10\) Their authors argued that the

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world of higher education must make a fundamental shift, from an institution-centred model to a mobile, flexible, technologically solid and more student-centred model. Such a world of higher education would be very unlike the one we have known for the past 500 years. These developments in the field of Open Educational Resources and their significance for education at the UvA will be discussed further in a separate policy document.

While there is always the danger that every change will be deemed to be beneficial and every tradition will be seen as old-fashioned, the higher education sector as a whole appears to be somewhat averse to innovation. Despite the fact that there are highly promising examples of it, there is no real evidence of a reorientation in the sector.11 This is fuelling concern that the universities are poorly equipped to adapt to a rapidly changing world. Yet, with more and more private-sector education providers entering the market, the need for innovation is increasing.

It is within this context that the UvA’s vision on teaching and learning is set out below.

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2. The UvA’s vision on teaching and learning

In the period ahead, the UvA will continue to pursue a number of its current policy lines, namely the further improvement of quality and study success rates, and innovation in teaching and learning. The following goals cited in the Strategic Plan 2011-2014: An Eye for Talent form the basis for the teaching and learning policy:

- Further improvement of quality
- Further improvement of study success rates in the Bachelor’s and Master’s programmes
- A link between teaching and research in the Bachelor’s and Master’s phases that focuses on academic development
- A more ambitious study environment
- Greater differentiation between and focus in the programmes

The Strategic Plan 2011-2014 outlines the environment within which these ambitions can be realised. This environment is briefly summarised below:

“High expectations can only be brought to fruition in a fertile climate, a climate predicated on the need for an intellectually challenging, inspiring and stimulating environment in which to work and study. A climate, moreover, in which students and staff are inspired to tap the full extent of their individual potential, where they are challenged to engage with social and cultural issues and spurred on to adopt an enterprising attitude. For the UvA, a good academic climate also means a guarantee of scholarly independence and integrity, whereby inquisitiveness, authenticity and determination are seen as the key forces behind excellence in (fundamental) research and education.”

Academic teaching and academic research are considered equally important at the UvA. The University has assumed the responsibility of preparing generations of ambitious students to become both internationally oriented professionals and

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responsible citizens of the world. Its large, heterogeneous student population constitutes an additional challenge in fulfilling this responsibility.

Academic training, which is the focus of all concerned at the UvA, is offered within the academic environment described above. Thanks to outstanding teachers, students and facilities, the UvA offers a challenging and stimulating setting in which to study.

Influenced by its location in Amsterdam, it is only natural that the UvA has an international approach. Students often encounter this international dimension during their studies: they travel abroad or come here to study, and the language of instruction of many of their courses is English. At the same time, the UvA collaborates with specific universities within and outside Europe.

The UvA seeks to achieve its educational objectives through a strong emphasis on research, a well-balanced and differentiated range of study programmes and an ambitious study environment. The focus of all the study programmes is academic development, in an academic setting premised on effective interaction between students and teachers. These principles are described in greater detail below.

2.1. Improving the quality of education

This policy line from the previous Strategic Plan will continue to be pursued in full. Driven primarily by the institutional desire to deliver a level of quality that meets its own standards but also by the requirements of external parties, the UvA works ceaselessly to improve the quality of its education. It does so through a process of integrated quality assurance. In the first place, improvements are sought in the study programmes themselves. But the programmes do not exist in isolation. Their quality is determined by related factors (e.g. quality of teachers, teaching facilities, use of resources). Improvements therefore also need to be made in the organisation as a whole. To make such improvements in a systematic, reasoned and coherent way, the UvA uses a system that continuously monitors, assures and improves the quality of education, namely the Deming or Plan-Do-Check-Act (PDCA) improvement cycle. A systematic PDCA approach leads to quality control, assurance and improvement, as shown in Figure 2 on page 10.
Within the UvA, each organisational level has its own PDCA cycle: Supervisory Board (RvT), Executive Board (CvB), faculty, College/Graduate School (Col/GS), study programme (opl), module. To ensure improvement in quality, the full cycle is implemented at each of these levels. For effective results, there must be clear coherence between the policies of the different levels. This element of coherence plays a much more important part in the present institutional audit, which was introduced in January 2011, than it did in the previous system. The levels of aggregation are shown in Figure 3 below.
Via audit trails based on policy themes, the Institutional Quality Assurance Audit assesses how the institution’s vision is translated into the study programmes. In the context of preparations for the new institutional audit, an internal audit was carried out in all those educational units of the UvA that will be involved in the 2013 institutional audit. On the basis of the results of the internal audit, an improvement plan was drawn up and is being implemented. The quality-assurance framework forms the basis for this plan.

2.2. Improving study success rates

Improving study success rates in the Bachelor’s phase is a policy line from the previous Strategic Plan that will be fully pursued during the term of the new Strategic Plan. In the long-term agreement between the Association of Universities in the Netherlands (VSNU) and the Dutch Minister for Education, Culture and Science, the Dutch universities agreed to pursue the following ambitions:

1. To strengthen the referral and binding function of year 1 of a Bachelor’s programme.
   *Ambition:* To assess, at the earliest possible stage (usually in the first semester), whether the student is enrolled in the programme to which he/she is most suited (matching/early binding), so that universities can transfer/refer students more successfully. Intake, transfer, referral and dropout rates (from the higher education system) will be monitored. Given the orientational, selecting and referral function of year 1 of a Bachelor’s programme, no target values will be specified for this.

2. To reduce by half the dropout rates in years 2 and 3 of a Bachelor’s programme (re-enrolment after year 1 of the Bachelor’s programme).
   *Ambition:* To reduce by half the dropout rates (from university education) and course-switching rates (within university education) in years 2 and 3 of a Bachelor’s programme by 2011 (2007 rate: 14%). After year 1 (the referral/transfer function) of a Bachelor’s programme.

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13 Auditing and Consulting Services ACS. Audit Instellingstoets UvA. Vrij blijven zonder vrijblijvendheid, January 2011.
binding year) of a Bachelor’s programme, it should be possible to make substantial reductions in dropout and switching rates.

3. To allow more students to complete a Bachelor’s programme in four years (re-enrolment after year 1 of a Bachelor’s programme).

*Ambition:* To have more than 70% of Bachelor’s students complete their programme in four years by 2014 (45% in 2007). The official three-year duration of a Bachelor’s programme is feasible, but extra student activities such as studying abroad and internships may mean that an additional year is required.

4. To allow more than 10% of students to take more than just the standard programme.

*Ambition:* To have more than 10% of students participate in programmes that are substantially more demanding than the standard study programmes (e.g. Honours programmes) by 2014.

In the agreements relating to dropout and study completion rates, a fundamental distinction is made between the first year of a Bachelor’s programme and the remaining years. The aim in the first year of a Bachelor’s programme is to orientate, select and refer/transfer, for the purpose of getting the right student into the right programme as early as possible (preferably in the first six months). The aim in the remaining years of a Bachelor’s programme is to guide the remaining students as successfully (and quickly) as possible through to graduation. In 2009, the Study Success Working Group 16 issued a report containing twenty recommendations. These are currently being implemented. This objective of improving dropout and study completion rates will continue to be pursued in full during the term of the new Strategic Plan.

The policy line of improving study success rates in the Master’s phase will also continue during the term of the new Strategic Plan. No performance agreements for Master’s study programmes have been made with the Dutch Ministry of Education, Culture and Science, but there is still reason to focus on improving success rates in the Master’s programmes. Success rates for Master’s programmes are currently somewhat difficult to interpret, since they relate to cohorts of students who began their studies before the introduction of the Bachelor-before-

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16 *Studiesucces aan de Universiteit van Amsterdam.* April, 2009.
Master rule (*de barde knip*). A considerable number of students already completed several Master’s modules while still in the Bachelor’s phase. The figures therefore give an overly positive picture. Study success rates for the one-year Master’s programmes are reasonably stable at most faculties. Study success rates for two-year Master’s programmes are lower, however, for three of the five faculties that offer these programmes. In all faculties, improving study success rates in the Master’s phase is a policy priority and appropriate measures are being taken.

### 2.3. Academic training

The Veerman Committee advocates a clear distinction between research-oriented universities and universities of applied sciences (*hogescholen*), and hence a recommitment to the binary system that currently exists in the Netherlands. Sharply defined profiles will enable both types of higher education to respond more effectively to the different levels and learning styles of students as well as to the various needs of the labour market. Important distinctions between research-oriented universities and universities of applied sciences relate to the undergraduate and graduate phases, academic training and the nexus between teaching and research.

#### 2.3.1. Higher education with an applied emphasis versus higher education with a research emphasis

Education at research-oriented universities is characterised by two interrelated cycles: the undergraduate phase and the graduate phase. In the undergraduate phase, the emphasis is on basic academic disciplines and competences. In the graduate phase (Master’s/PhD), the disciplines and competences are combined into general or more specific professional orientations. Academic training is not complete until the end of the graduate phase. Where research-oriented universities prepare their students for a specific profession, there is also often an on-the-job specialisation phase after completion of the research degree programme. In higher education with an applied emphasis, on the other hand, the undergraduate phase is a programme that is complete in itself and that prepares students for direct entry into the labour market. A graduate phase only exists to a limited extent: unlike at a research-oriented university, it does not follow on directly
from the undergraduate phase but instead provides a more in-depth perspective to students who often already have several years of practical experience.

Academic training at research-oriented universities involves learning to think critically and analytically, and is premised on a strong nexus between teaching and research. Such training is therefore incorporated into all study programmes in both the Bachelor’s and Master’s phases, including those programmes that are geared to the practice of a specific profession, such as physician, teacher, clinical psychologist, business administrator, pharmacist or jurist. In contrast, Bachelor’s programmes offered by universities of applied sciences are geared to specific occupational fields. These programmes focus on specialist knowledge, understanding and skills, and on work-based learning and practice-based research. At research-oriented universities, teaching and research are brought together in research-intensive programmes. Research is an autonomous primary process with its own dynamic, fundamental in nature and driven by curiosity. While programmes at universities with an applied emphasis also have a solid link with research, that research is practice-based, i.e. rooted in professional practice and focused on improvement and innovation in that profession.

2.3.2. Critical and analytical thinking

In the coming period, education at the UvA will again focus more closely on academic development, in which critical and analytical thinking are central. In recent years, this aspect of academic training has come under pressure because of the increasing massification of higher education. Higher education prepares students for a career in the modern knowledge society, in which, paradoxically, the increase in available knowledge does not automatically lead to greater certainty. The increase in knowledge production makes it difficult to retain a sense of the bigger picture. New knowledge generates new questions, and scholarly consensus is not present in all fields. Technological change is placing even greater demands on critical thinking. The ability to assess the credibility of information sources has become an indispensable aspect of critical thinking, and it must be taught explicitly to students. Today’s knowledge society requires not only a more highly qualified working population, but also new skills. At the

same time, basic skills continue to be important and their importance is increasing as a result of technological advances. Furthermore, in a globalising world, mastery of the English language is increasingly required as a matter of course. In short, the knowledge society of the future is placing increasing demands on advanced academic skills.

Over time, many definitions have been formulated for academic development, starting with Dewey in 1909 and progressing to modern variants such as Ennis (1993). More recently, Boulton and Lucas have described academic development as follows:

“All definitions of academic development include the following core elements: interpretation, analysis, evaluation, inference, explanation and self-regulation. These skills help students to form a specific, reflective judgment. The meanings of the core critical thinking skills are summarised in Table 1 on page 16.”

Table 1. Overview of core critical thinking skills

<table>
<thead>
<tr>
<th>Skill</th>
<th>Experts’ Consensus Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation</td>
<td>‘To comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria.’</td>
</tr>
<tr>
<td>Analysis</td>
<td>‘To identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express beliefs, judgments, experiences, reasons, information, or opinions.’</td>
</tr>
<tr>
<td>Inference</td>
<td>‘To identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses; to consider relevant information and to educe the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation.’</td>
</tr>
<tr>
<td>Evaluation</td>
<td>‘To assess the credibility of statements or other representations which are accounts or descriptions of a person’s perception, experience, situation, judgment, belief or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions, or other forms of representation.’</td>
</tr>
<tr>
<td>Explanation</td>
<td>‘To state and justify that reasoning in terms of the conceptual, methodological, criteriological, and contextual considerations upon which one’s results were based; and to present one’s reasoning in the form of cogent arguments.’</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>‘Self-consciously to monitor one’s cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis and evaluation to one’s own inferential judgments with a view toward questioning, confirming, validating, or correcting either one’s reasoning or one’s results.’</td>
</tr>
</tbody>
</table>

**Subskill**

<table>
<thead>
<tr>
<th>Categorise</th>
<th>Decode significance</th>
<th>Clarify meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examine ideas</td>
<td>Identify arguments</td>
<td>Identify reasons and claims</td>
</tr>
<tr>
<td>Query evidence</td>
<td>Conjecture alternatives</td>
<td>Draw conclusions using inductive or deductive reasoning</td>
</tr>
<tr>
<td></td>
<td>Assess credibility of claims</td>
<td>Assess quality of arguments that were made using inductive or deductive reasoning</td>
</tr>
<tr>
<td>State results</td>
<td>Justify procedures</td>
<td>Present arguments</td>
</tr>
<tr>
<td></td>
<td>Self-monitor</td>
<td>Self-correct</td>
</tr>
</tbody>
</table>
The ideal critical thinker not only possesses these cognitive skills, but also, in the end, internalises them into dispositions that shape his/her approach to life. Ultimately, critical thinking must transcend the lecture hall. An approach to life based on critical thinking is characterised by the following dispositions:

- **inquisitiveness** with regard to a wide range of ideas,
- **commitment** to becoming and remaining well informed,
- **alertness** to opportunities to use critical thinking,
- **trust** in the process of reasoned inquiry,
- **self-confidence** in one’s own abilities to reason,
- **open-mindedness** regarding divergent world views,
- **flexibility** in considering alternatives and opinions,
- **understanding** of the opinions of other people,
- **fair-mindedness** in appraising reasoning,
- **honesty** in facing one’s own biases, prejudices, stereotypes or egocentric tendencies,
- **prudence** in suspending, making or altering judgments,
- **willingness** to reconsider and revise views where honest reflection suggests that change is warranted.

### 2.3.3. Teaching processes and critical thinking

The development of the critical thinking skill/disposition also places certain requirements on the teaching process. Perspectives on teaching can be summarised in terms of two basic orientations, namely teacher-centred/content-oriented and student-centred/learning-oriented. The teacher-centred orientation is based on the view that teaching is about communicating information and disseminating structured knowledge. The student-centred orientation is founded on the view that teaching is about facilitating understanding and promoting conceptual change and intellectual development. This does not mean that content and thinking are strictly separated from each other. After all, learning to think critically involves using subject-related knowledge in an increasingly complex way in order to understand. Knowledge acquisition and the ability to think critically are therefore inextricably linked. It is important that critical-thinking skills and the dissemination of knowledge of the disciplines go hand in hand. This requires that teachers approach problems from several perspectives, and that they focus on establishing links between content and seeking
parallels in that content. Students are thus encouraged to develop the sensitivity and awareness to think from different perspectives. Teachers must encourage students to reflect consciously on their ideas and to analyse them in greater depth. In other words, students must be challenged to explore further.

Today, almost 70 years after Glaser conducted the first official study on critical thinking, there is still some way to go in terms of its actual realisation in academic teaching. His ideas remain influential, as is evident from The Critical Thinking Community website. While it is important to foster intellectual skills such as gathering information and making reasonable inferences, the emphasis should be on cultivating intellectual virtues, namely intellectual modesty, intellectual integrity, intellectual empathy, intellectual courage, intellectual autonomy and fairness. By focusing on intellectual dispositions in teaching, students are trained to become independent thinkers, people who routinely distinguish between what they do and do not know, people of integrity who are concerned about the ethical dimension of their thinking.

Embedding genuine critical thinking in the curriculum requires a long-term investment and commitment on the part of both teachers and students. A research-intensive programme is a form of education that is ideally suited to the academic development of students and to teaching them to become critical thinkers. This is discussed in more detail in the following section.

### 2.4. Research-intensive education

A curriculum is based on many factors, including available resources, legislation and regulations, the need for and importance of employability for students, lifelong learning, preparation for a role in society, and the link between teaching and research. This *Vision on Teaching and Learning* focuses particularly on the link between teaching and research, as this is an aspect that has come under pressure as a result of the increasing massification of higher education and the subsequent increasing heterogeneity of the student population. In addition,

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since the mid-1960s, the aspirations of students in research-oriented education have become increasingly profession-oriented. Universities are expected not only to train students to develop academically, but also to prepare them for their roles as citizens and as professionals in society. The role of higher education has thus become twofold: (1) to further the personal and intellectual development of students, and (2) to promote the economic and social welfare of society.

Within the margins of what is possible, as a research-intensive university the UvA aims to do all it can to preserve the teaching-research nexus in both the Bachelor’s and Master’s phases. It is the teaching-research nexus that distinguishes higher education with a research emphasis from higher education with an applied emphasis. An important aim of higher education with a research emphasis is to teach students that knowledge is continually evolving, but also to foster a fascination with the pursuit of knowledge. The latter is important not only in terms of bringing the academic training up to the desired academic level, but also in terms of the student’s employability. In a knowledge economy, all students – and certainly Master’s students – need to be ‘researchers’. Not only must they be prepared to be involved in knowledge production in the labour market, they must also be taught to deal with the risks and uncertainties inherent in the development of knowledge. Training at research-oriented universities exposes students to material that enlightens and empowers them, whatever their ultimate career path.

While contributing to their academic development, a student-centred, research-intensive training is also a promising, pedagogically sound way of preparing students for their future personal, professional and societal roles. In this context, the term ‘research’ is used in the broad sense of the word and incorporates fundamental, applied and practice-based research as well as industrial designs, etc., thus allowing for the distinctions between the disciplines.

The curriculum is the key area in which the link between teaching and research must be made. Bachelor’s programmes will be discussed first, not only because this is the core business of the majority of teaching at the UvA, but also because these programmes present the greatest challenge in terms of realising an effective

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link between teaching and research. The major questions being addressed by academia today as well as our understanding of them are continually changing as a result of new empirical evidence, and it is one of the tasks of research-oriented education to teach students how to deal with this increasing complexity – also as citizens and future professionals. All students must learn to understand that research is continually changing, and confirming and sometimes even undermining our understanding of the major questions. The classic nineteenth-century Humboldt model of the teaching-research nexus was based on the idea of a scholar/teacher teaching small groups of students who learned and conducted research together, the so-called ‘master/apprentice’ relationship. Given the scale of higher education today, it is not possible to preserve this tradition. However, we can maintain a vision on learning based on the idea that learning relates to questions that have not yet been solved and that it should therefore always be conducted in the research mode. A curriculum must focus on supporting the student’s intellectual experience of research as a learning process. A curriculum based on the research expertise of individual scholars (the so-called zendtijdmodel or ‘airtime model’) is unsatisfactory for this purpose.

The framework developed by Griffiths\textsuperscript{23} provides a basis for establishing the link between teaching and research in the Bachelor’s as well as the Master’s programmes. Griffiths identifies three modes in the relationship between teaching and research: research-led, research-oriented and research-based. In the first mode, research-led, teaching involves knowledge transmission based on research findings in the teacher’s area of expertise. In the second, research-oriented, students learn about the research process itself. Emphasis is on the process of knowledge production and attention is paid to the development of a research ethos on the part of the students. In the third mode, research-based, students learn as ‘real’ researchers. They carry out inquiry-based activities, and the division of roles between teacher and student is minimised. Healey\textsuperscript{24} translated Griffiths’ framework into the diagram on the next page and added a fourth category, namely research-tutored. In the latter mode, students write essays and


discuss their ideas with teachers. The most effective learning processes are usually those that combine all four modes. Where the emphasis is placed may vary between the Bachelor's and the Master's levels. The modes are shown in Figure 4.

**Focus on students**
Students as participants

<table>
<thead>
<tr>
<th>Focus on teachers</th>
<th>Focus on students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasis on research content</td>
<td>Emphasis on research processes and problems</td>
</tr>
<tr>
<td><strong>Research-tutored</strong></td>
<td><strong>Research-based</strong></td>
</tr>
<tr>
<td>Curriculum emphasises learning focused on students writing and discussing papers or essays</td>
<td>Curriculum emphasises students undertaking inquiry-based learning</td>
</tr>
<tr>
<td><strong>Research-led</strong></td>
<td><strong>Research-oriented</strong></td>
</tr>
<tr>
<td>Curriculum is structured around teaching the subject content</td>
<td>Curriculum emphasises the teaching of field-related processes of knowledge construction</td>
</tr>
</tbody>
</table>

Figure 4. Curriculum design and the teaching-research link
Based on: M. Healy & A. Jenkins
Research-intensive training must become the standard, beginning in year 1 of the Bachelor’s phase, with one or more of the modes indicated in the diagram in Figure 4, and ending in the Master’s phase, with concrete experience of research in an existing research project. Various sources with ideas on how to establish the link between teaching and research in the Bachelor’s phase can be found on the website of The Reinvention Centre of the University of Warwick. Taking a degree programme based on the nexus between teaching and research will inevitably have an effect on the skills acquired by the students by the time they obtain their qualification. The skills that students develop through research-intensive training in the Bachelor’s and Master’s phase are shown in Table 2 on pages 24 to 25.

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25 http://www2.warwick.ac.uk/fac/soc/sociology/rsw/undergrad/cetl/fundingopps/fellowships/fellows/jenkins
### Table 2. Characteristics of Bachelor’s and Master’s students who have received research-intensive training

<table>
<thead>
<tr>
<th>Bachelor’s - Year 1</th>
<th>Bachelor’s - Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>General knowledge/understanding of the discipline based on basic scholarly literature</td>
<td>More advanced specialist knowledge, in specific areas, based on academic articles and reflection on research</td>
</tr>
<tr>
<td>Knowledge of the discipline and relevant developments within it</td>
<td>Understanding of the significance and possibilities of relevant developments in the discipline, based on scholarly literature</td>
</tr>
<tr>
<td>Knowledge of the characteristics and forms of academic knowledge acquisition and knowledge building in one’s own discipline</td>
<td>Understanding of the dynamics of constantly evolving knowledge, also in a broader scientific context</td>
</tr>
<tr>
<td>Supervised identification/analysis of problems/ solutions using simple scholarly sources</td>
<td>Identification/analysis of problems / evaluation of solutions, independently or in groups, using more complex scholarly sources</td>
</tr>
<tr>
<td>Ability to systematically approach straightforward issues under supervision or with guidelines</td>
<td>Systematic analysis, under supervision or with guidelines, of more complex issues, pending further analysis</td>
</tr>
<tr>
<td>Assess existing conclusions and draw one’s own conclusions regarding known issues and existing research</td>
<td>Formulate new conclusions/ arguments/solutions/ recommendations for known issues/existing research</td>
</tr>
<tr>
<td>Ability to identify ethical, social, cultural and sustainability-related factors that are relevant to the discipline</td>
<td>Relate ethical, social, cultural and sustainability-related factors to issues in the discipline, including one’s own view</td>
</tr>
<tr>
<td>Knowledge of basic analysis/research techniques; application under supervision or in groups in simple research</td>
<td>Knowledge of the range of research methods relevant to the discipline; ability to apply them under supervision</td>
</tr>
<tr>
<td>Ability to apply, under supervision, basic techniques/ skills (e.g. search systems) relevant to the discipline</td>
<td>Ability to independently use relevant basic techniques and skills; knowledge and some experience</td>
</tr>
</tbody>
</table>
### Bachelor’s - Year 3

<table>
<thead>
<tr>
<th>Advanced specialist knowledge based on scholarly articles/ reflection on research; thorough knowledge of specific themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>As for Bachelor’s – Year 2, incl. ability to relate the developments to one’s own research plan</td>
</tr>
<tr>
<td>Realisation and appreciation of the dynamics of knowledge-building and knowledge development</td>
</tr>
<tr>
<td>Independently identify/analyse problems; evaluate/ formulate solutions with more complex scholarly sources/data sets</td>
</tr>
<tr>
<td>Relate new conclusions, arguments, solutions to old and new issues and research (data)</td>
</tr>
<tr>
<td>Awareness of the need for high standards (e.g. ethical, social, cultural and sustainable) in professional ethics</td>
</tr>
<tr>
<td>As for Bachelor’s – Year 2, incl. ability to independently apply a limited no. of analysis techniques/research methods</td>
</tr>
<tr>
<td>Ability to independently use relevant basic techniques/skills; knowledge/some experience with advanced res. techniques/skills</td>
</tr>
<tr>
<td>Independent use of relevant basic techniques/skills; knowledge/ some experience of advanced research techniques/skills</td>
</tr>
</tbody>
</table>

### Master’s

<table>
<thead>
<tr>
<th>In-depth knowledge of the discipline based on research, facts and argumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base new issues, argumentations and conclusions on knowledge of current developments in the discipline</td>
</tr>
<tr>
<td>Awareness/appreciation of the dynamics of knowledge building/ development; align one’s own research (attitude/approach) to this</td>
</tr>
<tr>
<td>Independently identify/analyse problems, formulate/ apply evidence-based solution with complex sources/data</td>
</tr>
<tr>
<td>Systematically/critically assess complex issues (also in the case of incomplete data/info) within relevant scholarly context</td>
</tr>
<tr>
<td>Originality/creativity in conclusions/argumentations/applications/ideas for follow-up research, in old/ new research questions/data</td>
</tr>
<tr>
<td>Awareness of need for high standards (e.g. ethical/social/cultural/sustainable) in professional ethics; reflect on/put into practice</td>
</tr>
<tr>
<td>Ability to independently apply a range of advanced analysis techniques/research methods relevant to the discipline</td>
</tr>
<tr>
<td>Familiar with/able to work independently with advanced techniques/skills in discipline-related (research) programmes</td>
</tr>
</tbody>
</table>
The exit qualifications per study year of the Bachelor’s and Master’s phases described in Table 2 can serve as guidelines for the faculties in developing the exit qualifications for their programmes.

The link between teaching and research is fully developed in the Master’s phase, and Master’s students acquire an excellent command of attributes that will enable them to contribute to a complex and uncertain future, in which skills such as questioning, verification, judgment and presentation – often in the context of limited or incomplete information – are becoming increasingly important. In short, skills and talents are developed that transcend the knowledge of a discipline and are applicable in a variety of contexts. Research and an inquiring disposition are not only important for students wishing to pursue an academic career. In the complex knowledge society of the twenty-first century, every professional with a research-oriented education needs these attributes. The highest level is attained in the Research Master’s degree, whereby students are taught to carry out a complex research project at a high academic level, from the planning stage through to the publication and presentation stage. By the time they reach the end of the Research Master’s programme, students are able to apply advanced scientific knowledge and skills from a position of personal autonomy and to take full responsibility for their work.

### 2.5. Active learning

With respect to academic development, a research-intensive education and improving study success rates, active learning is central at the UvA. Active learning can be supported both by the composition and spread of the curriculum over the academic year and by the use of teaching methods that actively involve students in the learning process. Active learning must be applied at several levels, namely in the curricula, the teaching methods and the teaching activities. These aspects will be discussed in succession below.

Structuring the curriculum is the tried and tested way of promoting active study behaviour and thus influencing study success. It is therefore one of the twenty recommendations included in the report by the Study Success Working Group. Learning achievements are strongly influenced by the student’s level of commitment and the amount of time devoted to independent study. A regular study pattern can be encouraged by spreading contact hours over five days a
week, and by ensuring that study load hours and the balance between independent study hours and contact hours are spread evenly over the year. It is important to find the appropriate threshold in contact time per week; an increase in contact hours should not be at the expense of independent study hours. It is important to achieve the proper balance between the two. Equally important in the curriculum is to take into account the independent study hours in relation to contact hours and major assignments. In addition to structuring, a second factor relating to the curriculum is the programming of course components. Good programming promotes regular study habits. To prevent competition between course components, it is important to spread modules, interim exams, deadlines for papers and resits as evenly as possible, and to take into account the related workloads. By structuring the curriculum so that teaching takes place in each semester but no more than two modules are offered per semester, students will remain actively involved throughout the year, and, moreover, have the best chance of successfully completing their studies. By actively involving students in the learning process from the beginning of the module (e.g. through interim tests and methods based on active learning), a situation can be avoided in which students do not actively focus on the subject material until the end of the module, at which time they have to take exams.

Active learning also refers to a method of teaching that is more student-centred. It is these methods that require students to make an active contribution to the learning process and encourage them to think critically. Active learning demands that students learn to take control of their own learning process. It also entails the process of leading students to insights in a structured way. What makes active learning ‘active’ is the cognitive processing that is needed to discover structure in teaching material, to organise this structure into meaningful clusters, to understand in which contexts the knowledge is applicable and to recall the knowledge fluently. Active learning thus transcends the straightforward acquisition of knowledge. It relates to encouraging and enabling students to seek out knowledge themselves, or to produce knowledge themselves and apply it consistently.

Active learning requires teaching methods that allow students to work on the course material at the same time as it is being taught, with the result that the curriculum reaches a higher level and more in-depth learning can take place. This can be done, for example, through such things as interim assignments and modular tests. Independent study can be organised along the same lines, so that it is clear to students what is expected of them during such study. It is even
worth considering timetabling independent study hours. This teaching method is based not on knowledge dissemination (as is the case when lectures are given) but, for example, on problem-oriented work within groups. If learning is ultimately to transcend the lecture hall, students must be encouraged to wrestle with their ideas, to incorporate them into existing thought structures and to experience the problems to be researched as relevant. Authenticity is an important criterion in this context. It is best achieved by presenting students with realistic, complex, unstructured problems. This encourages them, in their quest for solutions, to enter into dialogue with each other and with their teachers.

There are various teaching activities that contribute to active learning. Discussion is often regarded as a prototypical method of active learning. Other methods regarded in the same way include visual instruction, writing papers and essays, problem-solving, computer-based instruction, cooperative learning, debate, drama, role-play, simulations, games and peer teaching. The aim of the problem-oriented approach is mainly to transcend the level of exchanging personal views and to produce more in-depth analysis based on empirical facts. In practice, this turns out to be much more difficult to organise and assess than is commonly thought.

Active learning is often associated with a higher pressure of work. This can be avoided by seeking solutions that benefit both productivity and quality, as well as by clearly identifying successful measures and sharing these with others.

2.6. **Ambitious study ethos**

The key challenge in realising the above ambitions is to create an ambitious study ethos that is based on mutual obligation – on the part of the students, the teachers and the University as a whole. On the one hand, ‘study ethos’ refers to the interplay of motivation, commitment and attitude, involvement with the programme and a healthy degree of performance focus, all on the part of the student. On the other, it relates to the efforts within the study programmes to ensure that these student traits are developed to the maximum. The study ethos at the UvA is largely influenced by the strategic organisation of smaller-scale forms of teaching within the financial limitations (to counteract the massification in large-scale study programmes, for example), individualised teaching, engaged teaching staff, effective forms of supervision and clear agreements with students regarding commitment and study progress. It is reasonable to expect that
students will have fully familiarised themselves with the nature of an academic education during their prior studies, that they will devote sufficient time to their studies, that they will be interested in activities organised by the University and – based on an attitude of mutual responsibility – that they will participate in them. In promoting a more ambitious study ethos, several points must be borne in mind:

- **Choice of study programme:** a reliable and realistic provision of information is important in this context. It is also important that study programmes are comparable, both within a specific university and between universities.

- **Education intensity:** contact hours and course scale are important factors here. Students are not always automatically enthusiastic about their study programme, and often need to be activated by the context before they will assume an active role themselves. It is therefore important to excite students and to bind them to the educational environment, so that their performances will improve. Small-scale, intensive academic student counselling can contribute to this, in so far as existing financial limitations allow this.

- **The teacher on a pedestal:** an inspiring teacher makes all the difference. An important key to improving teaching is to create the scope for a strong culture of professionalism among teachers. The challenge rests in the fact that improvements in teaching must be initiated and implemented by teaching teams with a strong academic grounding. Evaluation of teaching activities is crucial in this context. The UvA encourages this by having teaching staff obtain specific teaching qualifications, such as the Basic and Senior Teaching Qualifications (BKO and SKO), and by linking these to career development.

2.6.1. **Professionalism of teaching staff**

Teachers play a key role with respect to quality of education, improving study success rates and contributing to academic development. The professional development of teachers is found at the interface between two policy areas: teaching policy and staff policy. At the UvA, professionalisation of teaching staff is an integral part of the strategic human resources policy framework. Professionalism in teaching benefits from a good mix of salary, development and career opportunities and possibilities for excelling (e.g. teaching prizes).
The professionalization of teaching staff currently involves obtaining the Basic Teaching Qualification (BKO) and the Senior Teaching Qualification (SKO).

With the signing of the agreement on the mutual recognition of the BKO (January 2008), the Dutch universities – and therefore also the UvA – agreed on a professional standard for academic teachers. Teachers possessing the qualification are therefore recognised, without further assessment, as qualified teachers by participating institutions. The aim of the UvA in signing the agreement is to give a further stimulus to both the professionalism and the appreciation of teaching staff. Formal training, such as a BKO programme, is important for the acquisition of (new) skills. It is mainly new and young teachers, who still need to work on professionalism, who benefit from the initial training which enables them to meet minimum requirements. Within the UvA, experienced teachers also take part in the BKO programme, although in their case individualised training is offered. Apart from this, teachers also develop through feedback from colleagues, a systematic reflection on and evaluation of their own teaching, the development of new curricula and the development and implementation of teaching innovations.

The approach to academic development described in this policy paper requires an academic community in which teachers and students work together – as a community of learners aiming for excellence among both students and teachers.

2.7. Differentiation

The UvA has a rapidly growing and heterogeneous student population. This growth is likely to continue until 2020. To respond more effectively to the motivations and talents of the different types of students at the Bachelor’s level, where possible and fundable, study programmes other than the existing disciplinary Bachelor’s programmes are being introduced and attention is being given to level differentiation (e.g. through Honours tracks and selective courses).

The UvA offers a comprehensive range of Bachelor’s programmes covering the arts, and science, social science and medical disciplines. In addition, some faculties offer broad Bachelor’s programmes which enjoy high success rates. Examples are the Bachelor’s programmes in Natural and Social Sciences, Psychobiology,
Interdisciplinary Social Sciences and Future Planet Studies. In addition, Amsterdam University College, a joint institute of the UvA and VU University Amsterdam, offers a Bachelor’s programme in the Liberal Arts and Sciences. When developing new Bachelor’s programmes, the main focus is on broad programmes that transcend disciplinary and/or faculty boundaries and that are also of international interest. An example is the development of the discipline at the interface of economics, law and behavioural science, which is clearly emerging internationally. Such Bachelor’s programmes challenge students to look beyond their own field. Moreover, for students with broad interests who do not wish to choose a specific discipline early on in their studies, they offer the opportunity of postponing the definitive choice until the Master’s phase. These programmes thus also help to prevent study completion delays and dropouts.

As a result of heterogeneity in the student population, a greater differentiation in levels is required. Many students seek greater challenges in their studies. The UvA has therefore developed Honours programmes. The disciplinary variant of UvA Honours programmes consists of extra modules taken during the Bachelor’s phase. Each study programme has its own variant of the Honours programme, with emphasis being placed on interdisciplinarity or a broader study of the relevant field. In addition to Honours programmes, faculties offer ‘excellence’ programmes, which allow for a more in-depth study of scientific, social, cultural, philosophical and topical themes.

The UvA offers two types of interdisciplinary Honours programmes, namely ‘stand-alone’ modules and Honours options. An Honours option is an extra programme in addition to an interdisciplinary elective module. The Institute for Interdisciplinary Studies offers the largest number of interdisciplinary Honours modules and options, but individual faculties also offer interdisciplinary Honours courses in addition to disciplinary programmes. Another option worth considering would be to allow students to compile their own Honours programme from a combination of Honours modules that coincide with their particular interests, and to allow them to submit this programme to the Examinations Board for approval. A University Honours Committee monitors the coherence of the programmes both within and between faculties. Honours programmes are designed to create opportunities for the most talented students.

Organising the diversity should also be considered. There are many different types of students at the UvA: fast students, unmotivated students, students who...
seek structure and students who want greater freedom in their studies. The option of offering different forms of guidance to those students who fall behind and who do not perform well than to those who have no difficulty completing their studies within the set period is worth considering. This diversity of students can be more effectively accommodated if it is recognised and a different approach is adopted in order to meet the different needs. In the same way as Honours programmes have been developed for the more talented students, the UvA has thus chosen to give firmer guidance to the less able students and to oblige them to focus on completing their studies in a structured way. In the case of students who have fallen behind, a study plan is agreed that involves regular checks and supervision. Furthermore, very clear distinctions are made between cohort groups, whereby those students who complete the Bachelor’s programme in three years are distinguished from those who require four years. This ensures that students who are perfectly capable of completing their studies without additional assistance and are clearly keeping to schedule do not feel patronised. It goes without saying that the organisation of such measures is the responsibility of the study programmes themselves.

The main aim of differentiation in study programmes is to develop programmes that are demanding for excellent students, inspiring for good students and provide structure for those students who might otherwise drop out. This differentiation in Bachelor’s programmes also helps those students who have difficulty in choosing a programme to narrow their choice as they advance in their studies. Clearly, the first step on the way to achieving this maximum development of all talents is to have An Eye for Talent.
Vision on Teaching and Learning

The policy document Vision on Teaching and Learning is an elaboration of the principle lines set out in the ‘Education’ section of the University of Amsterdam’s Strategic Plan 2011-2014: An Eye for Talent, which focuses on continuity together with innovation. Two lines that have been continued from the previous Strategic Plan are improving the quality of study programmes and increasing study success rates. Other important starting points for this Vision on Teaching and Learning are the Veerman Committee report on the Future Sustainability of the Dutch Higher Education System and the Strategic Agenda of the Dutch Ministry of Education, Culture and Science entitled ‘Quality in Diversity’ (Kwaliteit in verscheidenheid). The Veerman Committee’s recommitment to the binary system in the Netherlands calls for a clearer distinction between higher education with an applied emphasis and higher education with a research emphasis. As a result of exponential growth in student numbers, the level of these two forms of higher education appears to have grown too close together. To re-emphasise the distinction, this Vision on Teaching and Learning focuses on themes such as academic training and research-intensive programmes, along with the necessary changes in the mindset of the teaching staff and students that are required in order to achieve these goals.

Innovation in education only has a chance of succeeding if specific efforts are made at all levels, namely at the curriculum, teacher and student levels.

The strategic policy development at the University of Amsterdam (UvA) with respect to teaching and learning is structured like a three-stage rocket: the strategic priorities are set out in the Strategic Plan, the priorities are expanded upon in the Vision on Teaching and Learning and a number of priorities are given more concrete form in separate policy documents.

Credits
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Design April Design

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